Commercial Internet eXchange Association
March 24, 1997

Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, D.C. 20554

In the Matter of	)	
	)	
Access Charge Reform	)	CC Docket No. 96-262
	)	
Price Cap Performance Review for Local Exchange Carriers	)	CC Docket No. 94-1
	)	
	)	
Transport Rate Structure and Pricing	)	CC Docket No. 92-213
	)	
	)	
Usage of the Public Switched Network by Information Service and Internet Access Providers	)	CC Docket No. 96-263
	)	
	)	

COMMENTS OF THE COMMERCIAL INTERNET EXCHANGE ASSOCIATION

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COMMENTS OF THE COMMERCIAL INTERNET EXCHANGE ASSOCIATION

The Commercial Internet eXchange Association ("CIX"), by its attorneys, files these comments in response to the Commission's Notice of Inquiry[1] ("NOI") in the above-captioned dockets. CIX agrees with the Commission that it should seek to support, and not stifle, the development of the Internet. NOI at ¶ 315. CIX is fully committed to investigating ways that the marketplace can promote digital access and higher bandwidth to residences and businesses in the U.S., as well as maximizing the efficiency of the public switched telephone network ("PSTN").

CIX is the largest trade association of Internet service providers ("ISPs") in the United States and throughout the world. CIX represents 170 domestic and international members,

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1 Notice of Proposed Rulemaking, Third Report and Order, and Notice of Inquiry, CC Dkt. Nos. 96-262, 94-1, 91-213, 96-263, at ¶¶ 311-318 (rel. Dec. 24, 1996).

ranging from large providers of Internet backbone service to small local providers offering service to residential and business end-users. (A copy of a recent CIX membership list is attached hereto.)[2] The members of CIX carry over 75% of the nation's Internet traffic. CIX members use a variety of transmission means in conjunction with their services, including local loops, ISDN, ATM, Frame Relay, and xDSL. These transmission services are obtained from a variety of sources, including incumbent LECs, alternative and competitive access providers, IXCs, and wireless carriers, as well as private networks dedicated to Internet traffic. As a non-profit organization representing the industry, CIX works to facilitate global connectivity among commercial ISPs, and to foster fair and open environments for Internet interconnection and commercialization.

SUMMARY

CIX believes that the best way to reduce the incidence of network congestion and to achieve higher bandwidth at the local level is to make the PSTN more efficient, to permit ISPs added flexibility to connect to the PSTN, and to continue to promote competition with incumbent local exchange providers ("LECs"). New technologies are welcome and have an important role to play in achieving higher bandwidth, along with the efficient improvement of the PSTN. In response to the NOI request for a more comprehensive view of the ISP industry, CIX has recently undertaken a survey of ISPs in the United States (including CIX members and non-CIX ISPs), and submits herewith some initial results of its first survey in the attached report "Internet Service Providers Survey" (March 1997) ("CIX Internet Survey"). The CIX Internet Survey provides important insights into the Internet and LEC issues, as well as new technologies.

This proceeding is properly focused on an inquiry of higher bandwidth opportunities for American business, residential and public consumers. Network congestion can best be resolved

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2 These comments represent the views of CIX as a trade organization and are not necessarily those of individual CIX members.

through the introduction of additional local access capacity with new entrant competition, as well as technical solutions. By contrast, a change in the current federal access regulations to create a new fee on PSTN connection to the Internet, as some incumbent LECs have urged,[3] would not in any way produce a positive incentive for transition to the "more efficient transport of data traffic to and from end users." NOI at ¶ 313. Instead, raising the cost of access would concentrate those costs on residential users, while large institutional users with dedicated access would be much less impacted. It would also distort the current ISP market against independent providers and in favor of incumbent LEC providers. Moreover, the current local exchange monopoly leaves independent ISPs wholly dependent on the incumbent LEC for connection to their customers; the current market offers no pervasive substitute for the incumbent LECs' ubiquitous access to the U.S. consumer. At a time when these same incumbent LECs are now actively accelerating their own ventures in Internet services, one must be circumspect toward recent and coincident calls for permission to raise their ISP rivals' costs through new federal interstate charges.

Unquestionably, the Internet service industry is going through a period of steep competition, rapid change, and consolidation: the CIX Internet Survey demonstrates that the current market is filled with small and recently formed businesses. In such a competitive environment, the industry will have every economic incentive to make use of efficient high bandwidth access arrangements that improve the value of the ISP's service to the customer. Providing ISPs with the right to functional unbundled access to LEC service elements as well as to functional collocation, consistent with the purposes of the Commission's ONA and CEI policies, would improve the opportunities for the deployment of high bandwidth access services. A regulatory solution, however, designed to artificially tilt the industry toward one digital access

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3 *See, e.g.*, Comments of Pacific Telesis, CC Dkt. No. 96-262 at 74-80; Comments of U.S. West, CC Dkt. No. 96-262 at 83-85.

proposal or another by raising the costs of current LEC access will only introduce exogenous effects that will hamper efficient change and impair the current ISP market.

These comments and the attached CIX Internet Survey provide the Commission with data, anecdotal evidence, and arguments on the issues of access charges, network congestion, and the promotion of higher bandwidth opportunities for the American consumer. Part I provides an overview of the ISP market, based on CIX's own experiences and its survey. Part II argues that higher bandwidth and network congestion can best be resolved with the introduction of new competition, not access charges. Part III presents CIX's view that higher bandwidth technologies and connection arrangements will be introduced and accepted when the market has proven them to be effective and efficient. Part IV argues that the Commission could improve market opportunities for more efficient use of the PSTN providing ISPs with rights to unbundled network elements and collocation. Finally, in Part V, CIX posits that the introduction of access charges on Internet services would raise a number of legal and policy difficulties.

DISCUSSION

I. The Internet Access Market Today

In order to provide the Commission with a more complete picture of the Internet access market, CIX offers the following observations on the market as it is today, based on CIX's role as the leading ISP trade association for many years, its experience with the industry, and based on the results of its initial CIX Internet Survey.[4]

A. ISPs are Both Small and Large Businesses in Competition

While the common perception is that the Internet community is composed of large monolithic telecommunications giants, the reality is a far more heterogeneous market. The

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4 We wish to emphasize that CIX does not purport to hold up the CIX Internet Survey as the definitive and comprehensive survey of the complex Internet industry. It does, however, provide a valuable insight into the business and network structure of the 215 responding ISPs.

attached list of CIX members itself demonstrates the wide and complex variety of businesses that currently compete in the market.[5] A great many ISPs are small businesses. Of the ISPs in the U.S. responding to the CIX Internet Survey, 64% have average gross revenues for the past three years of $1 million or less and 91% of the ISPs have average total revenues for the past three years of $50 million or less. CIX Internet Survey at 1. Interestingly, very small business ISPs are also the "pure play" participants, with 85% of very small businesses reporting that most of their revenues were derived from ISP services. CIX Internet Survey at 6. By contrast, most large business ISPs (those with average gross revenues of $50 million or more) are diversified, with 69% reporting that they did not derive most of their revenues from ISP services. Id.

ISPs are a diverse group of companies that have chosen very different business strategies, with some focusing on service to corporate customers, some focusing on offering unique and highly customized bandwidth to corporations and governments, and other players -- both large and small -- pursuing the enormous potential of the residential market.[6] In general, the CIX Internet Survey shows that the very small business ISPs (*i.e.*, those with $1 million or less in average gross revenues) tend to serve mostly residential customers: the median of the very small business ISPs have a customer base that is 59% residential. CIX Internet Survey at 5. As the ISPs surveyed got larger in gross revenues, the ISPs' mean percentage of residential customers dropped significantly. Id. Conversely, the very small ISPs serve the smallest proportion of business and institutional customers (measured by either the average or the mean of the Survey), while the large business ISPs served the greatest proportion of businesses and institutions. Id.

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5 Boardwatch Magazine recently reported that its directory of ISPs listed 3,068 providers. The Internet Index, No. 17 (Feb. 15, 1997).

6 The CIX Internet Survey (at 15) also demonstrates that ISPs offer a variety of services, including: Web page "hit counter," HTML and CGI assistance and consulting, Web page forms retrieval, and a variety of other services.

The proliferation of ISPs in the U.S. is also a relatively recent phenomenon. The CIX Internet Survey found that the responding ISPs had been in business for less than three years. The Survey also showed that very small business ISPs had been in business an average of 2.5 years, mid-size business ISPs had been in business for an average of 3.3 years, and large business ISPs had an average of 3.9 years of business. CIX Internet Survey at 8. Not surprisingly, the number of ISP points of presence (connection to the Internet) increases as the ISP's revenues increase; however, each category of ISPs -- very small businesses, mid-size businesses, and large businesses -- serve rural areas. Id at 7.

B. Customer Use of the Internet

On-line time and the number of log-ons by Internet users has been the focus of much heated debate. The CIX Internet Survey shows that the mean number of on-line minutes per log-on by Internet customers of those ISPs responding is approximately 26 minutes, with approximately 31 log-ons/customer/month.[7] The incidence of customers who log on for hours or even days at a time is relatively rare, and represents a small fraction of the consumers using Internet access services.

C. Dedicated Access and Use of the PSTN

Customers use both dedicated access and PSTN access to connect to ISPs. Obviously, profit and non-profit institutions often have dedicated connections (such as T1 lines) to the ISP; those institutions have traffic levels to justify that expense. Residential customers generally rely on "dial-up" access, which involves the purchase of second line residential or business line service from the incumbent LEC.

The CIX Internet Survey is consistent with these observations. ISP respondents reported that roughly two-thirds of institutional customers (business and non-profit) used dial-up access,

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7 We note that these data do not distinguish between customers with dedicated access to the Internet from those using PSTN access.

while a significant minority use leased lines (7%), ISDN (8%), and Frame Relay (6%). CIX Internet Survey at 9. The CIX Internet Survey results show that the vast majority of residential subscribers (94%) use dial-up access, while a minority (5%) also purchase ISDN. Id. at 10. The CIX Internet Survey also shows that very small business ISPs serving residential customers are most highly dependent on the PSTN, with 80% of their customers using "dial-up" connection. The large business ISPs and their institutional customers, by contrast, are less dependent on "dial-up;" only 37% of institutions served by large business ISPs use analog "dial-up" connections. CIX Internet Survey at 11. However, all segments of the ISP industry -- from the very small to the large businesses -- expect at least a 100% increase in the growth of Internet services using "dial-up" connections. Id. at 8. CIX estimates that roughly one-half of all Internet services are currently offered using dedicated access, and the remaining one-half is offered through PSTN switched access.

Finally, the CIX Internet Survey demonstrates that ISPs experience considerable problems with incumbent LEC services, including installation delays, repair delays, and interruption of service. CIX Internet Survey at 14.

II. The Public Needs More Local Access Opportunities for Greater Bandwidth, Not Higher Prices for Incumbent LEC Services

It is abundantly clear that the Commission and the states are committed to promoting facilities-based competition for local telecommunications services. In its implementation of the Telecommunications Act of 1996[8] and its spectrum decisions and policies,[9] the Commission is

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8 Implementation for Local Competition Provisions of the Telecommunications Act of 1996, First Report and Order, CC Dkt. No. 96-98, 11 FCC Rcd. 15499 (1996)("Local Competition Order"), *appeal pending, sub nom.*, Iowa Util. Bd. v. FCC, (8th Cir.).

9 Amendment of the Commission's Rules to Permit Flexible Service Offerings in the Commercial Mobile Services, First Report and Order and Further Notice of Proposed Rulemaking, WT Dkt. No. 96-6, 61 Fed. Reg. 43721 (Aug. 26, 1996); Amendment of the

(Footnote continued to next page)

successfully fostering an environment where residential and business users will soon have several choices of local telecommunications providers. Paradoxically, some incumbent LECs allege that their local services used by residential and business customers to connect to local ISP offices are "overtaxing" their network with too much Internet traffic. The solution, some incumbent LECs offer, is to change existing law to permit them to impose a federal charge in addition to current charges, collect those additional funds for the same services, and then -- perhaps someday -- invest in improved digital switching technology designed to handle Internet traffic.[10]

For several reasons, CIX believes that the asserted "network congestion" issue does not warrant a change in federal law to permit higher access charges on Internet services.

A. "Network Congestion" Is Not a Problem the Commission Needs to Fix

First, and most fundamentally, is the lack of objective evidence to support that a "network congestion" crisis deserving a federal rulemaking does, in fact, exist. As the ETI Study shows, network congestion is, at best, an isolated problem.[11] The incumbent LECs' own studies of the issue focus on a tiny fraction of the end-office switches in the country's most heavily computer-oriented communities, such as Pacific Telesis' study of Silicon Valley, CA and Bell Atlantic's study of Reston/Herndon, VA.

Similarly, the incumbent LEC studies imply that ISPs and their customers are somehow responsible for instances of network congestion. These studies uniformly fail to consider that

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(Footnote continued from previous page)
Commission's Rules to Establish Part 27, the Wireless Communications Service, Report and Order, GN Dkt. No. 96-228, FCC 97-50 (rel. Feb. 19, 1996).

10 We note that not all incumbent LECs view this as a solution. *See* Comments of BellSouth, CC Dkt. No. 96-262 at 87.

11 "The Effect of Internet Use on the Nation's Telephone Network," by Lee L. Selwyn and Joseph W. Laszlo, ETI at VI (Jan. 22, 1997) ("ETI Study").

congestion on the telephone network is best resolved by better network planning decisions to take into account the uses that customers will put to their network. For example, as shown by the ETI Study (at 12-14), efficient pricing of digital T1 access lines would alleviate LEC end-office switch congestion at the line concentration module, in addition to offering ISPs and customers higher bandwidth. However, incumbent LECs have failed to price such digital services at reasonable rates and to provision the service throughout their areas. The CIX Internet Survey (at 9-10) shows that less than 8% of institutional customers and only 5% of residential customers currently subscribe to incumbent LEC ISDN services. Moreover, as the ETI Study points out, the incumbent LECs have themselves caused network congestion through inappropriate pricing and planning. ETI Study at n.26.

B. Raising Costs to Independent, Competitive ISPs is Not the Solution

CIX believes that solutions to network congestion, if and when it does occur, must involve cooperation and flexibility from both ISPs and incumbent LECs. Sanctioning higher costs for all Internet competitors for existing services is not a legitimate use of the Commission's processes, and network congestion can be more rationally resolved. For example, Pacific Bell recently approached one CIX member in an effort to resolve alleged congestion issues in the Silicon Valley, CA with a proposal that the ISP subscribe to Pacific Bell's access gateway service.[12] Although initially interested in the proposal, the ISP found that Pacific Bell's access gateway service was incompatible with the ISP's network technology. Instead, the ISP proposed to resolve the same problem by allowing the ISP to collocate in the LEC's distant central offices. The ISP would establish a modem bank collocated in the distance central office and connect those banks using T1 lines to the ISP's office; this was a network solution very similar to Pacific

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12 The access gateway service would effectively take Internet traffic off the LEC network by establishing a modem platform at the distant central office (the switching office serving the customer) and then route the traffic via Frame Relay service directly to the ISP's office.

Bells access gateway service. Pacific Bell refused the ISP's offer, claiming that ISPs have no collocation rights and that it is against Pacific Bell "policy" to offer such rights to ISPs.

A CIX member encountered similar incumbent LEC intransigence when it attempted to work with an alternative telecommunications carrier to bypass U.S. West's network. In order to obtain a more robust and reliable network than the incumbent LEC could offer, as well as to avoid continuing allegations of LEC network congestion, this CIX member arranged to have an alternative carrier collocate in U.S. West's distant end-offices and take the ISP customer traffic directly to the ISP office. This would have avoided all Internet traffic of the ISP in the two most acute areas of alleged network congestion: inter-office trunking and the end-offices serving the ISP's POPs. Despite this solution to the congestion problem, U.S. West has effectively precluded the alternative provider from obtaining T1 lines to implement the bypass. Time and again, CIX members face this sort of roadblock. *See also* CIX Internet Survey at 14 (79% of responding ISPs report service problems with incumbent LECs, including installation and repair delays, or interruption of service).

From these experiences, it seems that the incumbent LECs seek permission to charge ISPs more money for the same services, rather than resolving these isolated network congestion issues.

C. Competitive New Entrants May Soon Resolve the Alleged "Network Congestion" Issue

Competitors are beginning to emerge in today's market with modern, digital local access alternatives to the incumbent LEC. These competitors represent the greatest opportunity for ISPs and Internet users throughout the U.S. to gain customer-oriented digital and high bandwidth access at the local level. Examples of this emerging competition abound: the multitude of licensed wireless new entrants (including broadband PCS and SMR licensees); unlicensed wireless access providers (including the unlicensed PCS band and the NII band); a host of wireline competitive local exchange carriers affiliated with industry leaders such as MCI, Sprint, TCI, and WorldCom have initiated service; the cable television operators offering Internet and

telephony services using cable modems; and potential entrants from the new wireless services to be auctioned this year, including the 2.3 GHz WCS service and LMDS service. CIX also believes that incumbent LECs will respond to this vigorous competition, and improve the quality of PSTN access.

With the abundance of local digital access networks entering the market in the near term, the problem of "network congestion" is temporal at best. As new competitive local services are introduced, incumbent LECs will undoubtedly see a reduction of ISP traffic as competitors offer ISPs and their customers higher bandwidth and more customer-oriented digital access. Moreover, the entry of these alternative local networks will accurately bear out the Commission's own conviction that competition can and will lower prices for local access. Therefore, it is unreasonable to respond to allegations of current "network congestion" with an increase in rates for customers that are currently trapped into taking the incumbent LEC service. Once competition arrives, the overall wisdom of Internet access charges can be better assessed.

In CIX's view, the Commission should not respond to some incumbent LECs' complaints that they have too much business for the prices that they charge. As CIX and others have already demonstrated, the incumbent LECs are adequately compensated for their services. The aggregate revenues generated from ISPs for business lines is just the beginning of what incumbent LECs receive. The ISP industry also generates enormous additional revenues for incumbent LECs through second lines from their residential and business customers, as well as from the purchase of ISDN services, private line services, centrex services, and more. In addition, the alternative, off-peak traffic pattern of Internet usage helps incumbent LECs to spread their fixed network costs over more minutes of use, lowering their overall per-minute costs. Incumbent LECs, however, still maintain that their costs of servicing the Internet community are higher than all the revenue generated. CIX, like many others in the communications industry, believes that estimates of their own per-line "costs" by providers who do not face effective competition are

inherently suspect. Costs are much more easily measured and more valuable from a regulatory perspective when evaluated in a competitive market.

Moreover, using the proxy ceiling prices of the Local Competition Order, which were established on the basis of a competitive forward-looking cost methodology,[13] CIX believes that the incumbent LECs' claims of inadequate compensation for ISP customers' use of residential and business lines are overstated. When one compares current prices for residential lines (which may be either flat-rate or measured rate) with the Commission's proxy competitive prices for local loop,[14] switching and local transport,[15] it is far from clear that the incumbent LECs' current prices are inadequate in a competitive market.

III. The Market, and Not the Commission, Can Best Resolve How and When Local Access Bandwidth Is Improved

At ¶ 313 of the NOI, the Commission asks how it can "effectively create incentives for the deployment of services and facilities to allow more efficient transport of data traffic to and from end users." CIX welcomes the efficient introduction of technologies that will improve

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13 Local Competition Order, at ¶ 782 (proxies "are designed to approximate prices that will enable competitors to enter the local exchange market swiftly and efficiently and will constrain the incumbent LECs' ability to preclude efficient entry by manipulating the allocation of common costs among services and elements"); id., at ¶ 792 (proxy price ceilings for local loop were based on states' "forward looking economic cost studies").

14 The Commission established default competitive prices for unbundled local loop in the states that incumbent LECs complain are hardest hit by "network congestion" are: $11.10 (in CA), $11.75 (in NY), and $14.13 (in VA). Id. at App. D ("State Proxy Ceilings for the Local Loop").

15 The Commission set competitive proxy prices for local switching (at $.002 - .004/minute), tandem switching (at $.0015/minute), and local transmission facilities. As detailed in the ETI Study (at n.14 and 24), these per minute switching and local transport costs amount to no more than $.004 to $ .000105/minute. The CIX Internet Survey found that, on average, Internet users spent 819 minutes on-line per month. CIX Internet Survey at 3. Therefore, using the competitive proxy prices would amount to $3.28 to $8.60 per month.

digital traffic flow between the ISP and its customer, and the improvement of higher bandwidth to the home. In fact, ISPs succeed or fail in the competitive market largely due to their ability to meet customers' networking and bandwidth demands with reliable, low cost service. ISPs well know that the incumbent LEC networks, and the local pricing structure, are less than ideally suited for the transmission of Internet traffic. In the CIX Internet Survey (at 14), 72% of the responding ISPs reported installation delays, 53% of ISPs reported repair delays, and 52% of ISPs reported interruptions with incumbent LEC services. Only one-fifth of the responding ISPs reported that they did not have problems with the incumbent LEC services. An alternative to the incumbent LEC that can offer a more reliable and robust access to the customer is sorely needed.

Changes to the incumbent LEC networks and/or the introduction of competitive carrier networks that improve reliability, increase bandwidth, or offer innovative connection arrangements can only redound to the ISPs' benefit. After all, the final mile to the customer (which is now largely carried over the incumbent LEC telephony network) directly impacts the reliability of ISP's entire service offering. Therefore, the ISP community is certainly willing to pay for and invest in improving that final mile or avoiding switch congestion. ISPs are also willing to work together with LECs to resolve these issues.

For example, one CIX member in Vermont has established an amicable solution with NYNEX that ensures less Internet-related PSTN congestion and a more robust network for the ISP, even though the ISP pays more per channel. Specifically, NYNEX convinced the CIX member to move away from access via centrex lines, which cost $20 per month, to T1 access using either ISDN PRI or Flexpath, at approximately $42 per line. The ISP locates its offices near the NYNEX main switches, and purchases "virtual numbers" at remote switches (for $100/number/month). In this way, all customers of the ISP located near either the main or remote NYNEX switches can make a local call for Internet access, while NYNEX prevents a switch congestion issue at its end-office nearest the ISP's office. From the ISP's perspective, this relationship ensures a more robust network because (a) it allows the ISP to use Remote Access

Servers, such as Ascend 4004, and avoid modem banks of 400 modems, (b) it avoids "call forwarding" jumps, (c) it avoids additional rent and hardware in each remote LEC switch area, and (d) it minimizes the time and expense to fix problems and maintain the ISP network.

Like the CIX member in Vermont, ISPs will purchase data-efficient access or connection arrangements when they become available and when it is economically reasonable to do so. They will also work constructively with LECs who want to find mutually beneficial arrangements. The CIX Internet Survey demonstrates that ISPs are ready and willing to consider a number of alternatives to promote greater bandwidth, including technology that bypasses LEC central switching, ISDN service, ADSL, and xDSL. CIX Internet Survey at 13.

In general, two broad concerns have limited the application of these bandwidth alternatives. First, is the availability and pricing of those services. While LECs continue to test by-pass switches, ADSL and xDSL, CIX believes that these services are not yet widely deployed. Access using T1 lines and ISDN PRI deployment is a viable option when it is priced in a manner that is economically efficient for the ISP community. *See* ETI Study at 13-16. Second, the Commission must recognize that for many ISPs, the incumbent LEC's business line service was and still is the only access to the customer; therefore, these companies have invested significant capital in modem pools and facilities. This investment by the ISP community is a direct consequence of the historical and current local access monopoly. As a group, ISPs are willing to convert to greater digital bandwidth technologies as they become feasible. However, the Commission should understand that ISPs with significant equipment investments would prefer to maximize use of their investment, while exploring new technologies, only some of which are commercially available. In the near term, ISPs must continue to serve their customers and meet the exponential growth in demand for their services using access, including dial-up access, that is available today and is reasonably priced. CIX Internet Survey at 8 (ISPs expect significant growth in Internet customers using "dial-up" access).

For these reasons, CIX respectfully submits that a market solution is preferable to a government solution. CIX believes that there are technical and market-oriented solutions to reduce PSTN network congestion and to promote higher bandwidth. However, the matter needs additional time in the market to develop. In acknowledgment of the Commission's request (NOI, at ¶ 317), CIX and its members are encouraging a dialogue with incumbent LECs in order to better understand the problems facing all parties. CIX is concerned that a regulatory intervention at this time would raise Internet access prices for residential users, and may force ISPs and LECs to make hasty, inefficient technology choices.

IV. ISP Access To Unbundled Network Elements and Physical Collocation Could Improve Network Efficiency

At ¶ 313 of the NOI, the Commission seeks comment on what changes in the federal or state regulatory structure could improve "alternative network access arrangements," as well as the impact of the Local Competition proceeding on these matters. As described above, CIX believes that the Commission should allow local exchange competition and technological progress, and not access charges, to reduce network congestion and promote higher bandwidth for consumers who want it. CIX also believes that the current Open Network Architecture ("ONA") and Comparably Efficient Interconnection ("CEI") principles can and should be made consistent with the Local Competition parameters for network unbundling and collocation. Updating and reforming ONA/CEI rights that are available for all enhanced service providers and information providers will add to the flexibility that ISPs and LECs can employ as they find market-driven access and higher bandwidth solutions.

CIX recognizes the Commission's current position that the provision of information services does not create rights under Sections 251(c)(3) and (6) to unbundled network elements

and physical collocation.[16] However, as the Commission has also recognized, Section 251(g) "preserves the equal access requirements in place prior to the passage of the 1996 Act, including obligations imposed by the MFJ court and any Commission rules."[17] These equal access obligations include the rights of competing enhanced service providers to unbundled elements (i.e., the basic service elements) of the incumbent LEC networks, pursuant to ONA[18] as well as CEI.[19] If an incumbent LEC must unbundle network elements to the extent "technically feasible" pursuant to Section 251(c)(3), it is axiomatic that the LEC should likewise offer ESPs the same unbundled access to the same network features. Third Computer Inquiry, Report and Order, 104 F.C.C. 2d at 1065 (ONA should result in LEC offering of unbundled basic service elements for use by ESPs "to the extent technologically feasible"); California v. FCC, 39 F.3d 919, 927-28 (9th Cir. 1994) ("California III") (Court remands FCC decision not to require "fundamental unbundling" in Computer III Remand, BOC Safeguards Order, 6 FCC Rcd. 174 (1990)).[20]

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16 47 U.S.C. §§ 251(c)(3) & (6); Local Competition Order at ¶ 995. To the extent that information service providers also offer telecommunications services, however, they are fully entitled to Section 251 rights. *See* id., at ¶ 992.

17 In the Matter of Implementation of the Non-Accounting Safeguards of Sections 271 and 272, First Report and Order and Further Notice of Proposed Rule Making, CC Dkt. No. 96-149, FCC 96-489, at ¶ 251 (rel. Dec. 24, 1996).

18 Third Computer Inquiry, Report and Order, 104 F.C.C. 2d 958, 1064-68 (1986) (subsequent history omitted).

19 Id. at 958 ("the basic services and basic service functions that underlie the carrier's enhanced service offering must be unbundled from other basic service offerings").

20 The issues remanded by the California III court are currently pending before the Commission in, In the Matter of Computer III Further Remand Proceedings: Bell Operating Company Provision of Enhanced Services, Notice of Proposed Rule Making, CC Dkt. No. 95-20, FCC 95-48 (rel. Feb. 21, 1995).

In addition, physical collocation for ISPs would improve the range of possible solutions for market-driven high bandwidth to the customer. For example, xDSL is perceived as a service that could improve bandwidth for the end-user. However, xDSL is limited in its feasible range to approximately three miles from the ISP office to the customer. Therefore, the radius of customers that can be served using xDSL diminishes without physical collocation. For example, if an ISP must locate its office one mile away from the LEC central office, LEC-based xDSL can be used only by ISP customers that are within a two-mile radius of that LEC office. With collocation, however, the radius of customers that can be served with xDSL increases to three miles. CEI collocation, while initially considered in the context of pricing parity,[21] must also be reviewed in the context of technological parity, especially as many RBOCs offer xDSL service to their own ISP affiliates.

V. Access Charges Would Implicate Significant Legal and Policy Problems

CIX believes that the promotion of higher bandwidth for residential and business users can best be achieved by letting the market operate efficiently and by providing ISPs more rights to unbundling and collocation. Access charges, however, are likely to have a significant stifling effect on the ISP community, and raise a number of significant legal and policy concerns.

A. The Commission Lacks Clear Jurisdiction

Reforming Part 69 access rules to authorize LECs to specifically charge Internet communication would surely raise considerable issues of the Commission's jurisdiction over intrastate PSTN communications used by ISPs. Section 2 of the Communications Act of 1934, as amended,[22] limits the Commission's jurisdiction to interstate communications by wire or

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21 Id. at 1038 (Commission declined to mandate physical collocation because it merely "reduces transmission costs," while acknowledging that the objective of its CEI policy is "equal functionality" with the RBOC's enhanced service affiliate).

22 47 U.S.C. § 152 (1996).

radio.[23] Specifically, Section 2(b) provides that "nothing in this Act shall be construed to apply or to give the Commission jurisdiction with respect to (1) charges, classifications, practices, services, facilities, or regulations for or in connection with intrastate communication service by wire or radio of any carrier . . . ."[24] Because the Commission's jurisdiction is limited to interstate communications, it is unclear how the Commission would assert jurisdiction over ISPs' use of intrastate access lines. Of course, a state-by-state regulatory patchwork of intrastate access charges would likewise frustrate the efficient operation of the Internet.

In addition, the Commission has viewed Internet services as "enhanced" and "information" services, not as basic or telecommunications services. A change in its regulatory approach that would effectively treat ISPs like interstate telecommunications carriers, which would seemingly contradict the Section 153(44) proscription limiting the Commission's common carrier regulations to only those entities offering telecommunications services. 47 U.S.C. § 153(44).

Moreover, it is unclear how the Commission would assess an access charge on interstate, but not intrastate, Internet communications.[25] The telephony model, which relies on NPA and NXX codes corresponding to geographic and state boundaries, is simply inapplicable to Internet traffic. On the Internet, it is neither possible nor useful to determine the geographic location of Internet destinations. As a result, the Commission could not reasonably expect industry to

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23 Id.

24 47 U.S.C. § 152(b)(1). *See also* People of the State of California v. FCC, 905 F.2d 1217, 1239-45 (9th Cir. 1990) (recognizing and discussing the jurisdictional limitations contained in Section 2(b)(1) as applied to enhanced services).

25 Likewise, any state Internet access charge would involve regulation of interstate communications, in violation of Section 2 of the Communications Act.

discern whether such traffic is interstate or intrastate for separations and cost allocation purposes.[26]

Finally, in reviewing its jurisdiction, the Commission must also be mindful of the pro-competitive policies contained in the 1996 Act. Section 230(a)(2) of the Communications Act, states that is the policy of the United States to "preserve the vibrant and competitive *free market* that presently exists for the Internet and other interactive computer services, unfettered by *Federal or State regulation.*"[27] Such language clearly conveys an intent by Congress to discourage the regulation of Internet services in order to ensure the continued growth of the information marketplace. Thus, regulation by the Commission would be contrary to the plain language contained in Section 230(a)(2).

B. Competitive Considerations Caution Against Incumbent LEC Charges That Disproportionally Impact Independent Competitors

With incumbent LECs now actively competing in the Internet services market, the Commission should carefully consider the impact that new access charges would have on the competitive ISP market. For independent ISPs, especially small businesses, an additional cost of doing business would undoubtedly cause dislocation. *See* CIX Internet Survey at 11. The incumbent LEC ISP affiliate, however, is not similarly impacted, both because access charges amount to a mere accounting entry between affiliated companies, and because the parent of both the LEC and the ISP can well afford to sustain the affiliated ISP with profits while the access charges eradicate other ISP competitors. This problem is especially acute prior to the introduction of actual local exchange competition because independent ISPs have no alternative

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26 *See* 47 C.F.R. § 36.1 et seq. (1995).

27 47 U.S.C. § 230(b)(2) (1996) (emphasis added).

but to serve residences and small business customers using the incumbent LEC's PSTN network; even dedicated facilities are not an option for serving such customers.

The introduction of this competitive imbalance would run contrary not only to the free market policy objectives for the Internet, as discussed above, it would also contradict the Commission's own long-held policy to promote a plethora of information service providers in a deregulated market.[28] While the Internet access market can and should be shared with incumbent LEC affiliates, the Commission has always closely guarded the possibility of unfair competitive advantage that is leveraged on the incumbent LEC's monopoly control over the local exchange. This same concern is reflected in the Telecommunications Act of 1996.[29] Therefore, access charges should not be imposed in such a way as to cause a competitive dislocation in the Internet services market.

C. *Access Charges Would Harm Small Businesses and Raise the Price of Residential Internet Service*

Additional access charges for PSTN access to Internet users would turn on its head at least two policy objectives of Congress and the Commission: the promotion of advanced services for all Americans, and the elimination of regulatory barriers for small business entry in communications. 47 U.S.C. §§ 254, 257.

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28 *See, e.g.*, Second Computer Inquiry, Final Decision, 77 F.C.C. 2d 384, 429-30 (1980) (subsequent history omitted) (the public interest benefits in deregulation of enhanced services accrue to regulators, the service providers, and consumers, and "[t]o the extent regulatory barriers to entry are removed and restrictions on services are lifted there is a corresponding potential for greater utilization of the telecommunications network through greater access to new and innovative service by a larger segment of the populace.").

29 *See, e.g.*, 47 U.S.C. § 254(k) ("A telecommunications carrier may not use services that are not competitive to subsidize services that are subject to competition.").

As suggested by the CIX Internet Survey (at 10), an overwhelming number of American homes rely on the PSTN to connect to the Internet. Quite logically, these users cannot afford a dedicated private line connection to the ISP, and so they rely on the incumbent LEC second residential line services. By contrast, the large institutional users (either corporations or non-profits) are far more likely to purchase dedicated connections, and avoid use of the PSTN. CIX Internet Survey at 9, 11. An increase in the costs of PSTN usage, especially in the competitive ISP market, would disproportionately raise the price to consumers and small businesses for access to the Internet.[30] Yet, this result contradicts the Section 254 mandate for the Commission to encourage "[a]cess to advanced telecommunications and information services." 47 U.S.C. § 254(b)(2); id at § 254(h).

Likewise, the small and very small business ISPs are likely to be hardest hit by raising the costs of PSTN access with an access charge specific to Internet use. The CIX Internet Survey shows that the very small business ISPs (i.e., those with less than $1 million in average gross revenue over the past three years) serve primarily (59%) residential customers. CIX Internet Survey at 5. Of those very small business ISPs, 80% of their customers (both residential and institutional) use PSTN access. Id. at 11. These very small business ISPs are also the "pure play" in the market, as 85% derive the majority of their revenues from the provision of ISP services. Id. at 6. In numbers, these businesses make up most of the ISP industry today. Id at 1 (64% of responding ISPs earned average gross revenues of $1 million or less). Thus, if the Commission authorizes an additional charge for PSTN access, many small business ISPs would be particularly impacted. Such a result would be flatly contrary to the Commission's statutory obligation to remove market entry barriers for "entrepreneurs and other small businesses in the

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30 We also note that businesses currently using PSTN access could well shift to leased line access or some other access technology if access charges also raise the cost of connecting to the Internet via business lines. However, it is unlikely that residential users would be as willing to search out and pay for alternative access arrangements.

provision and ownership of telecommunications services and information services." 47 U.S.C. § 257(a).

CONCLUSION

CIX looks forward to working with the Commission and with incumbent LECs to achieve higher bandwidth access for the American consumer. Higher bandwidth access that is efficient and market-driven will, in turn, further congressional objectives that all Americans have access to advanced services.

Respectfully submitted,

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